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ABSTRACT

Alternative curriculum strategies can be used to conduct an effective photography program without the expense usually associated with a darkroom. Three methods can be used to eliminate the need for a darkroom facility: outside vendors, an emulsion that can be user-processed without access to a darkroom (slide or transparency film), and emulsions that self-develop outside the camera (instant print film). All three strategies emphasize the picture-taking rather than the mechanical processes of producing a viewable result. If an outside vendor is used, students need instruction on how to seek out services, how to evaluate services, and how to place orders. Advantages are a wider range of services, lower costs, better quality, and time for other aspects of photography. Disadvantages may be cost, turn-around time, and loss of control over end result. Advantages of the user-processed emulsion are the need for some darkroom experiences, reduced time, lower costs, and control over end result. Disadvantages are processing errors, variations, and no quality controls. Advantages of instant print film are immediacy, low cost, and good results. A disadvantage is that the cameras using this film are usually automatic for exposure control and sometimes for focusing. (Resources and sources are cited.) (YLB)

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TEACHING PHOTOGRAPHY WITHOUT A DARKROOM

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Photography is a valuable communication skill desirable in many vocations. As the communication world relies increasingly on visual communication, photographic skills are frequently used to record, document, and communicate. At the same time schools and institutions are frequently hard pressed to provide the requisite facilities for teaching photography. Darkrooms are expensive to construct, equip, and maintain. Providing or expanding the physical facilities to accomodate student demand is often beyond the school's resources. However, by using alternative curriculum strategies, it is possible to conduct an effective photography program without the expense usually associated with a darkroom. In fact, teaching a non-darkroom course may offer more flexibility to the curriculum than having a darkroom facility available. When a darkroom is present, continued use is required to justify its existence. Pressure is present to include darkroom experiences in the curriculum whether appropriate or not. The ability to alter the program to meet the diverse and changing needs of the students can be more difficult.

With alternative methods for film processing available, the student learns to effectively use these. The student also learns

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the advantages and disadvantages of each method, and the procedures and costs associated with using each method.

In the business environment, several methods are used for obtaining finished photographic products. Some businesses maintain complete in-house processing facilities. Others rely solely on vendors to provide the finished prints. Still others have a combination of these two methods (depending upon the skills and the needs of the organization). Many independent professional photographers (whether owning a darkroom or not) rely solely upon outside vendors (commercial processors) for their processing.

There are advantages and disadvantages to each of the above mentioned methods. It is the purpose of this paper to suggest that the School Curriculum could be modified to use some of the same methods that businesses use, thus, producing a comparable or better curriculum offering at reduced costs. The major advantage of using alternative strategies for processing film and prints is that the students will be better prepared to meet the demands of the job market.

School curriculae in photography fall into three categories: Schools offering a comprehensive, multi-course offering; Schools offering a one or two course "basic" program; and Schools wishing to implement a program on a limited budget. It is not denied that some students will want a full curriculum in photography, and some programs can be found which will answer this need. However, in schools wishing to implement

a program, or in institutions desiring to modify a program, the following is presented as a method to both implement a curriculum and to do so with a small capital outlay. It is based on the premise that students need exposure to alternative methods for film and print processing and that when such alternative methods are introduced that a program will evolve that more closely meets the needs of the students.

Three methods can be used to eliminate the need for the expense of a darkroom facility. The first method utilizes outside vendors entirely for the processing of student film. The second method relies on an emulsion which can be user-processed without access to a darkroom (slide or transparency film), and the third method uses emulsions which self-develop outside the camera ("Instant Prints"). All strategies place an emphasis on the picture-taking process rather than on the mechanical processes (darkroom processes) of producing a viewable result.

For the beginning students, the ability to translate a scene into a latent image on the film is of paramount importance. If it is not on the film (correctly) it is lost forever. The skills of lighting, composition, and exposure are requisite to all else. Once the image is on the film, the processes necessary to produce a viewable image are mechanical. That is, they can (and probably should be) performed by machine, eliminating the human element, and hence, increasing the consistency of the results.

The acquisition of the fundamental skills and knowledge associated with exposure, composition, and lighting require time to convey, learn, and practice. The introduction of the darkroom skills into the course can detract from the learning of the basic skills of exposure, composition, and lighting. It may sound like heresy to suggest that one need not know how to develop film and print pictures to be a good photographer. However, as stated previously, these are largely mechanical skills not necessary to the central need. These mechanical processes can be effectively performed by others, leaving the photographer to concentrate on the taking of the picure. Only in certain instances, where complete control of the entire photographic process is desired to produce a special effect (i.e: creative photography), need the photographer become involved in the mechanics of processing. Whatever knowledge and information about these processes that one desires can be obtained by other than hands-on learning.

The basic purpose of the course must be considered. Is it the intent of the course to train photographers to perform almost all tasks associated with photography (including darkroom skills) or is it to produce photographers capable of using photography in their job? True, some students will want to continue study in photography, and thus, additional learning experiences in darkroom and advanced topics are valuable. In deciding on the direction of the course, one must consider the basic needs of the students, time, and cost factors.

Darkroom experience is time consuming. Darkrooms are expensive to construct, equip, and maintain. The user-processing of photographic materials may be more expensive than commercial processing. Thus, alternative strategies need to be considered.

The first method requires that the students film be processed by an outside vendor. These outside vendors fall into two categories: Custom Laboratory and Photofinisher. The differences between the two are usually in the range of services offered. The custom lab will do anything needed at a price. This is the place that the professional photographers send their work. Processing is done with extra care and to the customer's specifications. Technicians are specialists in their area and the results are the best obtainable. A full range of services is available.

The photofinisher on the other hand is a volume processor usually offering a limited range of services. This is not to say that the quality is less, but only that automated equipment is frequently used, limiting the range of custom services available. The photofinisher is able to offer these limited services at a reduced cost through automation and mass production.

The students need instruction in how to seek out these services, how to evaluate the services and how to place orders (communicate) to receive the services desired. Even if the photographer has access to a darkroom, the use of outside vendors is warranted when the desired results are beyond the scope or expertise of the photographer. The

advantages of using the custom lab or the photofinisher are: a wider range of services are available; costs may be less than doing-it-yourself; quality may be better, as prints are tolerant of exposure and compositional errors which can be corrected in the printing process; time is available for other aspects of photography. Depending upon the service requested, the disadvantages may be in cost, time (turn-around), and a loss of direct control over the end result. However, some custom labs permit the photographer to monitor the entire process. Most custom labs follow instructions for corrections for the final print as given by the photographer.

The number of vendors are many. They conduct business on both a walk-in basis and by mail. Most advertise, either in the Yellow Pages or in the classified and display advertisements of photographic magazines. It is a matter of choosing one, contacting the business and obtaining information on the range of services available. The final choice of a processor depends upon an evaluation of the results -- something the student must learn to perform regardless of the source of processing.

By utilizing the services of outside vendors, the student will be able to concentrate on the picture-taking aspects of photography and learn skills which are readily transferable to the world-of-work.

However, it may still be the desire of the students to do some work themselves, or a desire of the intsructor to introduce some laboratory experiences into such a camera-only oriented course.

There is a second method available to preserve the do-it-yourself impulse. This second method again dispenses with the darkroom. In fact, no special facilities are needed. Only access to hot and cold running water. It is true "kitchen sink" photography. Color slide film -- reversal film -- can be user-processes with a minimum of equipment and no darkroom. Kodak Ektachrome film and other E-6 compatable process films can be processed using only the appropriate chemistry and a daylight film tank. The entire process is only slightly more complicated than processing black and white film. The result is color transparencies (slides) which can then be viewed using either a hand-held viewer or by projecting them on a acreen.

The advantages are: some darkroom type experiences are used; time is reduced in that only about one hour is required from camera to mounted slides; costs may be slightly less; and control over the end result is possible allowing for special effects. The heavy equipment requirements of a darkroom are eliminated. The disadvantages are: there can be processing errors and variations which affect the results; the quality controls available to a commercial processor are not available to the individual.

Because slides are a fixed format, fixed process, and are not tolerant of exposure and compositional variations, errors are easier to detect and mistakes are more apparent. These are useful when evaluating student work, particularly in the areas of composition, lighting, and exposure.

What you see is what you get.

The equipment necessary to user-process reversal film is: a daylight tank; the chemicals and containers; an accurate thermometer; a plastic tub for a water bath; a timer (or clock); slide mounts; and the "kitchen sink". Also needed will be either a totally dark closet or a changing bag for loading the film into the tank. Processing the film is very much like processing black and white film. Only a few more chemicals are required, and time and temperature must be carefully controlled. All processing is done in the tank with the processed film hung to dry. When dry, the film is cut into individual frames and mounted in the slide mounts. All steps are well within the skill range of the beginning photography student and are well documented. The result is slides that are ready to view within a minimum length of time and with a minimum level of effort.

A third method of producing viewable results is to use the "instant" print film as offered by Polaroid and Kodak. The prints are ready for viewing almost immediately. The obvious advantage is the immediacy of viewing. Other advantages are that the cameras using these films are relatively inexpensive and the results are technically very good. The major disadvantages are that the cameras using this film are usually automatic for exposure control (and sometimes focusing), and hence, the manipulation of these variables is eliminated. Such a film is, however, very useful for teaching lighting and composition.

In summary, three methods of producing viewable images are available to the students without the necessity of using a darkroom. Each method, commercial processors (outside vendors), color slide film, and instant prints, has advantages and disadvantages, depending upon the emphasis of the course and the results desired. By using one or more of these methods it is possible to institute a photographic curriculum for minimum cost.

There are several resources available to help the teacher plan the curriculum. Many pamphlets, course outlines, curriculum guides, and technical information are available from Kodak and others, either free or at a nominal cost. Ordering information is shown below for suggested guides. For those wishing to process Ektachrome and other E-6 process films, information and chemistry is available from Kodak and Unicolor, and others. These products can be purchased from a full service photo dealer.

Useful source books:

Kodak Catalog of Educational Materials (ED2-1).

Index to Kodak Information (L-5)

Single copies of both of the above catalogs are available free on request from: Department 412-L, Eastman Kodak Company, Rochester, NY 14650.

References:

Identifying E-6 Processing Errors. Kodak Pamphlet No. E-65. Single copies are free. See above address.

The Joy of Photography, 1979.

More Joy of Photography, 1981.

Both books are by the authors of the Eastman Kodak Company. Published by Addison-Wesley. Available in photography stores.